

PATENT

REMARKS

Claims 1 and 4-13 are pending in the application. Claims 1 and 4-13 have been rejected.

Rejections under 35 U.S.C. § 102

Claim 9 was rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. US 2002/0021681 to Madour (hereinafter "Madour").

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (Aug. 2001) (*quoting Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Id.* (*quoting Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1051, 1053 (Fed. Cir. 1987)). In addition, "the reference must be enabling and describe the applicant's invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

Applicants respectfully submit that claims 9 is not anticipated by Madour for the reasons and explanations set forth below.

With respect to claim 9, Applicants respectfully submit that Madour does not teach or suggest all of the limitations of claim 9. In particular, Madour does not disclose "identifying the first radio access network as a first type of radio access network and the second radio access network as a second type of radio access network. . .". In addition, Madour does not teach or suggest "initiating a mobile IP re-registration based on said identifying."

Madour discloses an improved handoff method for mobile IP in a cdma2000 network. (Abstract) Madour is directed to a method for changing the routing of traffic to a mobile station in a cdma2000 network comprising first and second packet data serving nodes (PDSN) and a home agent (HA). There is a tunnel between the first and second PDSN through which data traffic received by the first PDSN for the mobile station is sent. The first PDSN transfers PPP context information relating to the mobile station to the second PDSN. Upon receipt of the necessary PDSN context information, the second PDSN sends an Agent Advertisement to the

PATENT

mobile station that sends a Mobile IP (MIP) Re-registration message to the HA, which then changes the registration for the mobile station so that data traffic for the mobile station is sent to the second PDSN. (Paragraph 0010)

Applicants respectfully submit that Madour does not teach the limitations "identifying the first radio access network as a first type of radio access network and the second radio access network as a second type of radio access network" and "initiating a mobile IP re-registration based on said identifying" because Madour is directed solely to transfers between PDSNs in the same type of network, a cdma2000 network. Madour teaches nothing about identifying different types of radio access networks and all messages in Madour are designed for compatibility with a cdma2000 network. Despite careful study of the Madour reference Applicants find no teaching of different types of radio access networks. Therefore, Applicant requests that the rejection of claim 9 be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Madour in view of U.S. Patent Publication No. 2002/0067692 to Yun (hereinafter "Yun").

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Madour has been discussed above. Yun discloses a method for assigning orthogonal codes used for a first system and a second system in a CDMA system including channels of the first system for spreading a pilot signal, a sync signal, a paging signal and a traffic signal with a first set of orthogonal codes corresponding to orthogonal code numbers in different rows from a set of orthogonal codes arranged in a matrix of m rows and m columns, and channels of the second system for spreading a second set of orthogonal codes corresponding to orthogonal code numbers different from said orthogonal code numbers for the first set of orthogonal codes. (Abstract) Despite careful study of the Yun reference Applicants find no teaching or suggestion for handoffs of data transmissions between PDSNs of different network types. Therefore, neither

PATENT

Madour nor Yun,, nor the combination of Madour and Yun teaches or suggests "identifying the first radio access network as a first type of radio access network and the second radio access network as a second type of radio access network; and initiating a mobile IP re-registration". Combining Madour and Yun would result in a cdma2000 network that would perform handoffs according to the method of Madour and would assign Walsh codes based on the method of Yun. The combination of Madour and Yun does not ameliorate the routing ambiguity caused by switching from one network type to another because neither Madour nor Yun teaches or suggests "identifying the first radio access network as a first type of radio access network and the second radio access network as a second type of radio access network; and initiating a mobile IP re-registration." Both Madour and Yun are silent regarding the above limitations. Applicants respectfully submit that claims 10 and 11 are allowable.

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Madour in view of Yun and U.S. Patent Publication No. 2002/0067707 to Morales (hereinafter "Morales").

Madour and Yun are discussed above. Applicants submit that claim 12 is further allowable as the combination of Madour, Yun and Morales fails to teach or disclose the limitation "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station". Morales discloses a method and apparatus to control handoff between two different wireless systems. A link is provided between the first and second base station systems to enable a network-initiated handoff procedure. If a source base station system detects that a handoff of a mobile station is required, the source base station system exchanges messaging over the link with the target base station system to perform the handoff. (Abstract). The combination of Madour, Yun and Morales fails to teach or suggest the limitation "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station". The combination of Madour, Yun, and Morales does not teach or disclose handling routing ambiguity caused by the change from one type of network to another type of network.

In addition, Applicants submit that the rejection based on Madour, Yun, and Morales is based on impermissible hindsight reconstruction. Neither Madour nor Yun has any provision for

PATENT

a mobile station moving between networks of different types. Adding Morales does not solve the difficulties because creating a message mechanism between different base stations still results in routing ambiguity. Madour transfers mobiles from one PDSN to another but does not transfer across different network types, Yun assigns Walsh codes, and Morales provides for message linkage between base stations. Applicants respectfully submit that combining Madour, Yun, and Morales does not teach the limitation "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station".

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Madour in view of Yun and U.S. Patent 5,657,375 to Connolly (hereinafter "Connolly").

Claim 13 depends from allowable claim 9 and is allowable for the reasons given above. Applicants submit that claim 13 is allowable because the combination of Madour, Yun and Connolly does not teach or suggest the limitation "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station". Madour and Yun have been discussed above. Connolly is directed toward a wireless personal communications system having voice/data image two-way calling and intercell handoff provided through distributed logic. The personal communication system facilitates direct interconnection and switching of PCS call traffic through the digital network interface and the public switched telephone network, or any switched network. (Abstract) The intercell protocol hand-off being provided through distributed logic which is implemented in software that is resident in the intelligent portable handset terminals, in the intelligent base stations, and in the public switched telephone network (or any switched network). (Abstract). Neither Madour, Yun, nor Connolly teaches or suggests the limitation "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station" found in amended parent claim 9. Applicants therefore submit that claim 13 is allowable as depending from an allowable base claim.

Claims 1, 4, 5, and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,665,537 to Lioy (hereinafter "Lioy") in view of U.S. Patent 6,163,704 to Joong

PATENT

(hereinafter "Joong"). Applicants respectfully submit that claims 1, 4, 5, and 8 are allowable because the combination of Lioy and Joong fails to teach or suggest all the limitations of the claims.

Lioy discloses a method for invoking mobile node registration in a wireless communication network. The communication device monitors the packetized data from an Internet Protocol (IP) address contained in an IP address request. (Abstract) If the IP address is for a static IP address the communication device waits for network movement information. (Abstract) Based on the received network movement information, the communication device solicits network address information. (Abstract) Upon receipt of the network address information, the terminal device then initiates Mobile Node registration. (Abstract). As a result, the Mobile Node registration is automatically invoked whenever the terminal device changes its network point-of-attachment. (Abstract, emphasis added)

Lioy automatically re-registers the mobile node whenever movement is detected. This re-registration occurs regardless of the type of radio access networks involved. Lioy does not take into account routing ambiguities caused by the movement from one radio access network of one type to a second radio access network of a second type. Therefore, Lioy does not disclose "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station". Nothing in Lioy provides for analyzing the radio access networks involved to ascertain whether they are of different types. Applicants submit that claim 1 is rendered obvious by Lioy.

Joong discloses a number of different mechanisms for effecting the delivery of digital data messages to mobile stations which have currently selected an analog control channel. (Abstract) In instances where message delivery over the control channel is interrupted due to mobile station roaming, a forced re-registration occurs following the new server selection, thus triggering continued message delivery over the new control channel. (Abstract) Specifically, Joong provides for control channel handoff. The message center initiates a modified digital delivery point to point invoke communication destined for the addressee mobile station, and further identifies that the mobile station is operating on an analog control channel. (Col. 6, lines 45-49) The invoke is routed to the serving mobile switching center where a check for the length

PATENT

of the message is made. If the message is less than a predetermined length, delivery will be attempted using the analog control channel as the transmission medium. The digital data message within the invoke is then translated for analog control channel delivery and partitioned into a multiple message components. (Col. 6, lines 55-58) The individual components of the translated and partitioned message are then sequentially delivered to the addressee mobile station via the serving base station. (Col. 6, lines 64-67) If the addressee mobile station is moving during the course of the sequential delivery the mobile station engages in server reselection, thus choosing and locking onto a new control channel. (Col. 7, lines 12-16) Joong teaches that the mobile station makes a forced registration with the mobile switching center in connection with the newly serving cell. The mobile switching center receives the registration signal, recognizes that both the mobile station and the fact that the prior message delivery, interrupted by the reselection, remains uncompleted. (Col. 7, lines 20-27) Sequential delivery of the message components via a new serving base station (and new control channel) continues starting with the first individual component in the sequence which has not yet been acknowledged. (Col. 7, lines 27-30) Despite careful study of the Joong reference, Applicants are unable to find any teaching or disclosure of "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station".

In addition, combining Lioy and Joong does not result in Applicants invention. Combining Lioy and Joong produces a system that re-registers a mobile whenever movement is detected and then transmits digital data over the analog control channel if the mobile is communicating in an analog mode. There is no suggestion or teaching in the references to take into account transitioning from one network type to another. Applicants respectfully request that the rejection of claim 1 be withdrawn.

Claims 4, and 5 are each allowable for the reasons given above for claim 1.

Claim 8 is allowable as depending from allowable claim 1. Furthermore, claim 8 is allowable as Lioy does not disclose "wherein said determining comprises sending a fake origination to said second radio access network". The Examiner cites column 9, line 65 to column 10 line 1 as disclosing "wherein said determining comprises sending a fake origination to said second radio access network". Applicants respectfully disagree. Lioy states "In state 460,

PATENT

the MT2 device 104 sends a Solicitation Message to available Foreign Agents to exploit the default Agent Advertisement mechanism, as outlined in Mobile IP RFC 2002." A Solicitation Message sent to a Foreign Agent is not "a fake origination". Furthermore, a Solicitation Message is sent to the Foreign Agent, not to "a second radio access network". Applicants respectfully submit that Lioy does not disclose "wherein said determining comprises sending a fake origination to said second radio access network".

Claims 6 and 7 were rejected under 35 U.S.C. §103(a) as being obvious over Lioy in view of Joong and further in view of U.S. Patent 6,708,031 to Purnadi (hereinafter "Purnadi").

Applicants respectfully submit that the rejection of these claims under 103(a) based the above-recited art references are improper because Lioy may not be used as a prior art reference under 103(a), according to section 103(c). Specifically, 35 USC § 103(c) excludes references which may only qualify as prior art under 35 USC § 102(e), (f), and (g) from being used as a prior art reference under 35 USC § 103(a) under certain circumstances. The text of 35 USC § 103(c) recites "Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." See 35 USC §103(c), MPEP 706.02(I)(1), 37 CFR §1.104(c)(4).

Lioy was filed on January 21, 1999 and issued on December 16, 2003 while the present application was filed on December 6, 2000, which was before the date Lioy was issued. Therefore, Lioy may only qualify as a prior art reference under 102(e). However, the subject matter of Lioy and the claimed present invention were, at the time the invention was made, owned by Qualcomm Incorporated or subject to an obligation of assignment to Qualcomm Incorporated. Accordingly, based on section 103(c), Lioy may not be used as a prior art reference under 103(a) as a basis for rejecting the present claims under section 103(a). Therefore, Applicants respectfully request that the rejection of the above-recited claims under 35 USC §103(a) be withdrawn.

PATENT

Applicants respectfully submit that a prima facie case of obviousness has not been established regarding claims 6 and 7 because the prior art cited does not teach or suggest all the claim limitations.

Claims 6 and 7 depend from claim 1. Claim 1 is not rendered obvious by Lioy and Joong for the reasons given above for claim 1. Additionally, claims 6 and 7 are not rendered obvious by the combination of Lioy, Joong, and Purnadi. Neither Lioy, Joong, nor Purnadi teaches or suggests the limitation "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station". Purnadi is directed toward a method of triggering a new session or handoff procedure for multi-network systems where the networks are incompatible. Purnadi discloses a first identifier from the first network is determined. This identifier determines the location of the user equipment in the first network. (Col. 2, lines 24-29). The first identifier is provided to an entity connected to the first and second networks. The entity associates a second identifier of the second network with the first identifier of the first network. (Col. 2, lines 29-33). The entity associates a second identifier of the second network with the first identifier of the first network. The second identifier indicates the location of the user equipment in the second network. A second identifier of the second network is determined which indicates the location of the user equipment using said entity for associating the first identifier and the second identifier. (Col. 2, lines 33-39). Combining Lioy, Joong, and Purnadi does not provide the teaching of applicants' invention, specifically "determining, at the mobile station, whether changing from communicating over the first radio access network to communicating over the second radio access network will cause routing ambiguity for data sent to and from the mobile station". The combination results in a system that re-registers moving mobile stations and transmits digital data using an analog control channel, with the moving mobile stations tracked by identifiers. Therefore, claims 6 and 7 are not rendered obvious by the combination of Lioy, Joong, and Purnadi.

PATENT

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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